

**HARBOR ISLAND S&G OU
QUARTERLY PROGRESS REPORT
April 2017**

Prepared by de maximis, inc.

PROJECT NAME: Harbor Island Soil and Groundwater Operable Unit (S&G OU)
Harbor Island Superfund Site
Seattle, Washington

PERIOD COVERED: January through March 2017

The information provided on groundwater monitoring and specific design sets is based on information reported from the consultants listed below.

- Groundwater Monitoring: AECOM
on behalf of the Harbor Island S&G OU Group

- Design Set 1A: Floyd Snider
on behalf of Vigor Shipyards

- Design Set 2: AECOM
on behalf of Port of Seattle

- Design Set 3: Floyd Snider
on behalf of Vigor Shipyards

ACTIONS TAKEN TOWARD COMPLIANCE WITH DECREE DURING QUARTER:

GENERAL:

Groundwater Monitoring Program:

The long-term groundwater monitoring program is scheduled to run through 2035. A technical memorandum was completed and submitted on August 25, 2015 to EPA with recommendations for optimizing the groundwater monitoring program. On October 8, 2015, EPA commented on the technical memorandum approving the following reductions¹:

- Sampling frequency from semi-annual to annual sampling during the dry season,
- Analyte list from nine total metals [arsenic, cadmium, copper, lead, mercury, nickel, silver, thallium, and zinc] and available cyanide to three total metals [copper, lead, and zinc] and available cyanide with benzene to continue being sampled at one well, and
- Number of monitoring wells from 22 to 15. Monitoring wells include 14 compliance wells and one interior well.

There were no actions completed during the first quarter of 2017.

SPECIFIC DESIGN SETS:

Design Set 1:

- Completed.

Design Set 1A:

- The West Shed system is currently intermittently operational, as FW-17 and FW-19 groundwater pumps and skimmers are routinely shut-off, as necessary, to allow for LNAPL re-accumulation. The FW-19 passive skimmer will be continually monitored for LNAPL re-accumulation.
- The East Shed recovery system remains shut down due to absence of LNAPL in wells FW-3, FW-20, and FW-21. These wells are considered inactive and are now monitored on a quarterly basis. The status of the East Shed recovery system remains unchanged since the

¹ U.S. EPA, 2015. U.S. EPA Comments – Request for Groundwater Monitoring Reduction for the Harbor Island Soil and Groundwater Operable Unit and Supporting Technical Memorandum. Harbor Island Soil and Groundwater Operable Unit, Harbor Island Superfund Site, Seattle, WA. October 8.

system became inactive in November 2014. Currently, the East Shed remains in place and a schedule has not been determined to date for its disassembly.

Design Set 2:

- Completed.

Design Set 3:

- Completed.

ACTION ITEMS FOR NEXT QUARTER (*April – June 2017*):

Groundwater Monitoring Program:

The annual groundwater sampling event will be completed in the dry season of 2017 per Addendum 1 to the Groundwater Monitoring Plan, Revision 3. At the continued request of EPA, the Harbor Island Soil and Groundwater Operable Unit and the Lockheed Operable Unit have synchronized groundwater sampling events. To achieve coinciding events, this year's sampling will be completed in May, which is during the dry season as confirmed in the Technical Memorandum for Groundwater Monitoring Reduction for Harbor Island Soil and Groundwater Operable Unit (AECOM dated August 25, 2015).

SPECIFIC DESIGN SETS:

Design Set 1:

- Completed.

Design Set 1A:

- The West Shed system is currently intermittently operational, as FW-17 and FW-19 groundwater pumps and skimmers are routinely shut-off, as necessary, to allow for LNAPL re-accumulation. The FW-19 passive skimmer will be continually monitored for LNAPL re-accumulation.

- The East Shed recovery system remains shut down due to absence of LNAPL in wells FW-3, FW-20, and FW-21. These wells are now considered inactive and are now monitored on a quarterly basis. Currently, the East Shed remains in place and a schedule has not been determined to date for its disassembly.
- Submit the quarterly report on the operation of the LNAPL Recovery System to USEPA.

Design Set 2:

- Completed.

Design Set 3:

- Completed.

PROJECT COMPLETION:

Design Set	Remedial Design	Remedial Action
Design Set 1 - <ul style="list-style-type: none"> • T18 • T18D 	100% 100%	100% 100%
Design Set 1A	100%	95%
Design Set 1B	100%	100%
Design Set 2	100%	100%
Design Set 3-TPH Hot Spot at Vigor	100%	100%

- Groundwater Monitoring Program 36%

ANTICIPATED DELAYS/PROBLEMS:

- None.

RESULTS OF SAMPLING/TESTING/FIELD MEASUREMENTS:

- **Groundwater Monitoring Program:**

There were no actions completed during the first quarter of 2017.

Design Set 1A

- Detailed reporting of product recovery operations for this period will be included in the next quarterly LNAPL Recovery System progress report submitted directly to USEPA by Vigor Shipyard.